

DIRECT TESTIMONY AND EXHIBITS OF

MICHAEL L. SEAMAN-HUYNH

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2019-3-E

IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF

DUKE ENERGY CAROLINAS, LLC

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Michael Seaman-Huynh. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as Deputy Director of Energy Operations in the Utility Rates and Services Division of the Office of Regulatory Staff (“ORS”).

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received my Bachelor’s Degree from the University of South Carolina in 1997. Prior to my employment with ORS, I was employed as an energy analyst with a private consulting firm. I joined ORS in 2006 as an Electric Utilities Specialist and was promoted to Senior Electric Utilities Specialist in 2010. When the Energy Regulation Department was formed in August 2015, I assumed the position of Senior Regulatory Analyst. In May 2016, the Utility Rates and Services Division was formed, and I was promoted to the position of Senior Regulatory Manager. I assumed my current position in August of this year.

Q. HAVE YOU TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA (“COMMISSION”)?

**THE OFFICE OF REGULATORY STAFF
1401 Main Street, Suite 900
Columbia, SC 29201**

1 A. Yes. I have testified on numerous occasions before the Commission in connection
2 with hearings concerning annual fuel clause proceedings, general rate cases, and Utility
3 Facility Siting and Environmental Protection Act proceedings.

4 **Q. WHAT IS THE MISSION OF ORS?**

5 A. ORS represents the public interest as defined by the South Carolina General
6 Assembly as:

7 [T]he concerns of the using and consuming public with respect to public
8 utility services, regardless of the class of customer, and preservation of
9 continued investment in and maintenance of utility facilities so as to provide
10 reliable and high-quality utility services.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to set forth ORS's recommendations resulting from
13 our examination and review of Duke Energy Carolinas, LLC's ("Company") fuel expenses
14 during the review period. The review period includes the actual data for June 2018 through
15 May 2019 ("Actual Period"), estimated data for June 2019 through September 2019
16 ("Estimated Period"), and forecasted data for October 2019 through September 2020
17 ("Forecasted Period").

18 **Q. WAS THE REVIEW PERFORMED BY YOU OR UNDER YOUR SUPERVISION?**

19 A. Yes. The review to which I testify was performed by me or under my supervision.

20 **Q. WHAT DID ORS'S REVIEW OF THE COMPANY'S FUEL EXPENSES**
21 **INVOLVE?**

22 A. ORS examined various fuel related documents as part of our review. These
23 documents address the Company's fuel, environmental, and purchased power expenses for
24 the Actual, Estimated, and Forecasted Periods. In preparation for this proceeding, ORS
25 analyzed the Company's monthly fuel reports. ORS examined the Company's contracts

1 for nuclear fuel, coal, natural gas, fuel oil, transportation, and environmental reagents.
2 ORS also evaluated the Company's policies and procedures for fuel procurement. All
3 information was reviewed with reference to the Company's existing Adjustment for Fuel,
4 Variable Environmental, Avoided Capacity, S.C. Code Ann. §58-27-865 (the "Fuel Clause
5 Statute"), and the Company's approved Distributed Energy Resource Program, S.C. Code
6 Ann. § 58-39-140 ("DERP").

7 **Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE**
8 **COMPANY'S PROPOSAL?**

9 **A.** ORS met with Company personnel from various departments to discuss and review
10 fossil and nuclear fuel procurement, fuel transportation, environmental compliance costs
11 and procedures, emission allowances, forecasting, and general Company policies and
12 procedures pertaining to fuel procurement. In addition, ORS monitored the nuclear, coal,
13 natural gas, transportation and renewable industries through industry and governmental
14 publications.

15 **Q. DID ORS REVIEW THE COMPANY'S ENVIRONMENTAL COMPLIANCE**
16 **RELATED COSTS?**

17 **A.** Yes. ORS reviewed the Company's environmental compliance related costs
18 including allowances for nitrogen oxide ("NO_x") and sulfur dioxide ("SO₂") emissions,
19 reagents (i.e., limestone, ammonia, urea, etc.), and chemicals used in the reduction of these
20 emissions. The use of these chemicals and reagents reduces the Company's NO_x and SO₂
21 emissions, and the costs associated with the use of these substances are included in the
22 Company's Adjustment for Fuel, Variable Environmental, Avoided Capacity, and DERP
23 costs tariff as provided by the Fuel Clause Statute.

Q. DID ORS REVIEW THE ACCURACY OF THE COMPANY'S FORECAST?

A. Yes. As shown in Exhibit MSH-1, the Company's actual MWh sales were 0.29% higher than expected during the Actual Period. Exhibit MSH-2 shows, on average, the actual fuel costs for the Actual Period were 11.62% higher than the projected monthly fuel costs. Exhibit MSH-3 shows the actual fuel expenses for the Actual Period were 11.05% higher than the Company's projections for the Actual Period.

Q. PLEASE DISCUSS ORS'S REVIEW OF THE COMPANY'S FORECASTED SALES AND COSTS FOR THE ESTIMATED AND FORECASTED PERIODS.

A. ORS reviewed the Company's projected sales and analyzed them with regards to the projections from its last fuel proceeding in Docket No. 2018-3-E and the actual sales from the Actual Period. ORS found the Company's sales projections to be reasonable and in line with historical sales data.

ORS reviewed the Company's forecasted costs for nuclear fuel, coal, natural gas, fuel oil, transportation, and environmental reagents for the Estimated and Forecasted Periods. ORS compared the monthly projected costs to historical projections from Docket No. 2018-3-E, actual data from the Actual Period, and commodity prices from numerous industry publications. ORS found the Company's forecasted costs to be reasonable.

Q. DID ORS DETERMINE THE PRIMARY DRIVERS OF THE COMPANY'S REQUEST FOR A RATE CHANGE IN THIS PROCEEDING?

A. Yes. Exhibit MSH-4 shows the cumulative ending period balances of base fuel, environmental, capacity, and DERP avoided costs beginning in May 2010. As of May 2019, the Company had a cumulative base fuel under-recovery balance of \$86,217,228, a cumulative environmental over-recovery balance of (\$965,535), a cumulative capacity

1 related over-recovery balance of (\$5,379,540), and a cumulative DERP avoided costs over-
2 recovery balance of (\$1,472). This is reflected in ORS witness Briseno's Audit Exhibit
3 ADB-5. As shown on ORS witness Briseno's Audit Exhibit ADB-5, ORS projects the
4 Company to have a cumulative base fuel under-recovery balance of \$79,341,242, a
5 cumulative environmental under-recovery balance of \$346,746, a cumulative capacity
6 related over-recovery balance of (\$7,457,040), and a cumulative DERP avoided costs over-
7 recovery balance of (\$18,582) by September 2019. The Company's request for an increase
8 is driven primarily by the base fuel balance being higher than in the previous year (Docket
9 No. 2018-3-E). One of the contributing factors to this higher balance was the reduction of
10 the Company's forecasted expenses by \$34 million approved by Commission in Order No.
11 2018-862 which approved a stipulation between the Company, and the South Carolina
12 Energy Users Committee (SCEUC) and ORS. This is offset in part by decreased delivered
13 coal and natural gas prices during the Forecasted Period and the cumulative capacity related
14 over-recovery balance.

15 **Q. WHAT CHANGES DOES THE COMPANY REQUEST TO ITS CURRENTLY**
16 **APPROVED FACTORS?**

17 **A.** The Company requests the Commission approve an increase to its currently
18 approved Base Fuel Component ("Base Fuel Component") for the Forecasted Period.
19 Additionally, the Company requests to update its Variable Environmental Component
20 ("Environmental Component"), Capacity Related Cost Component ("Capacity Related
21 Component"), and DERP Avoided Cost Component ("DERP Avoided Cost Component")
22 to reflect the Company's forecasted expenses and allocation of these expenses to each class
23 of customer based on its contribution to the Company's winter 2018 peak.

Q. DOES ORS RECOMMEND ANY ADJUSTMENTS TO THE BASE FUEL COSTS PROPOSED BY THE COMPANY?

A. Yes. As addressed by ORS witness Briseno, ORS made a correction to the Company's base fuel costs to correct for the Fuel Benefits in DERP Net Energy Metering Incentive during the Estimated Period. The Company inadvertently reversed the signs for the four (4) months of the Estimated Period on Revised McGee Exhibit 2, page 2, line 70. This correction is shown in Audit Exhibit ADB-5 and is reflected in Exhibit MSH-5.

Q. ARE THERE ANY ADDITIONAL FACTORS IN THIS DOCKET THAT WILL IMPACT CUSTOMERS' BILLS?

A. Yes. The Company included proposed rates related to its DERP incremental expenses. ORS witness Wilhite addresses the Company's incremental expenses to be recovered as a fixed charge ("DERP Charge") on customer bills.

Q. WHAT IMPACT WILL ORS'S PROPOSED FUEL FACTORS AND THE ADDITIONAL FACTORS HAVE ON A RESIDENTIAL CUSTOMER'S BILL?

A. Exhibit MSH-5 reflects ORS's calculation of the Base Fuel Component for the billing period of October 2019 through September 2020, with all ORS adjustments incorporated. Exhibit MSH-6 provides a comparison of the ORS proposed fuel factors to the Company's proposed Base Fuel Component, Environmental Component, Avoided Capacity Component, and DERP Avoided Cost Component. If approved by the Commission, the ORS proposed rates, including the recommended DERP Charge addressed by ORS witness Wilhite, would increase the average monthly bill for a residential customer on Rate RS using 1,000 kWh from \$122.45 to approximately \$123.99, a net increase of \$1.54 or 1.26%.

1 **Q. WILL YOU UPDATE YOUR TESTIMONY BASED ON INFORMATION THAT**
2 **BECOMES AVAILABLE?**

3 **A.**Yes. ORS fully reserves the right to revise its recommendations via supplemental
4 testimony should new information not previously provided by the Company, or other
5 sources, becomes available.

6 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

7 **A.**Yes, it does.

Office of Regulatory Staff
Comparison of South Carolina Estimated to Actual Energy Sales
Duke Energy Carolinas, LLC
Docket No. 2019-3-E

EXHIBIT MSH-1

		2018							2019					
		June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Actual Period Total
[1]	Actual Sales (MWh)	1,970,260	2,001,436	2,019,597	2,459,971	1,489,714	1,644,780	1,807,572	1,804,193	1,816,483	1,574,348	1,584,731	1,678,910	21,851,995
[2]	Estimated Sales (MWh)	1,839,548	1,989,970	2,064,263	1,996,723	1,653,194	1,656,273	1,730,096	1,941,622	1,890,160	1,701,479	1,617,314	1,708,606	21,789,248
[3]	Difference [1]-[2]	130,712	11,466	-44,666	463,248	-163,480	-11,493	77,476	-137,429	-73,677	-127,131	-32,583	-29,696	62,747
[4]	Percent Difference [3]/[2]	7.11%	0.58%	-2.16%	23.20%	-9.89%	-0.69%	4.48%	-7.08%	-3.90%	-7.47%	-2.01%	-1.74%	0.29%

Office of Regulatory Staff
Comparison of South Carolina Estimated to Actual Fuel Cost
Duke Energy Carolinas, LLC
Docket No. 2019-3-E

2018														2019					
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Actual Period Average						
[1] Actual Experience (¢/kWh)	1.9356	1.9991	1.9964	1.6763	2.1003	2.0800	2.1708	1.9706	2.2269	1.8430	1.7126	1.9664	1.9732						
[2] Original Projection (¢/kWh)	2.0020	2.0230	1.8760	1.5770	1.7070	1.8090	1.9290	1.7480	1.5800	1.6120	1.6570	1.6930	1.7678						
[3] Amount in Base (¢/kWh)	1.7270	1.7270	1.7270	1.7270	1.8227	1.8227	1.8227	1.8227	1.8227	1.8227	1.8227	1.8227	1.7908						
[4] Variance from Actual [1-2]/[2]	-3.32%	-1.18%	6.42%	6.30%	23.04%	14.98%	12.53%	12.73%	40.95%	14.33%	3.36%	16.15%	11.62%						

Office of Regulatory Staff

Comparison of South Carolina Estimated to Actual Base Fuel Costs
 Duke Energy Carolinas, LLC
Docket No. 2019-3-E

EXHIBIT MSH-3

		2018							2019					
		June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Actual Period Total
[1]	Actual Experience (Total \$)	\$37,827,961	\$39,696,512	\$39,996,901	\$40,907,009	\$30,957,031	\$33,875,516	\$38,900,363	\$35,206,694	\$40,104,090	\$28,664,533	\$26,788,535	\$32,659,043	\$425,584,188
[2]	Original Projection (Total \$)	\$36,519,454	\$39,931,577	\$38,386,524	\$31,141,264	\$28,076,400	\$29,810,740	\$33,236,521	\$33,792,208	\$29,712,132	\$27,260,537	\$26,619,673	\$28,745,602	\$383,232,631
[3]	Difference [1]-[2]	\$1,308,508	-\$235,065	\$1,610,377	\$9,765,744	\$2,880,631	\$4,064,776	\$5,663,842	\$1,414,486	\$10,391,958	\$1,403,996	\$168,862	\$3,913,441	\$42,351,557
[4]	Percent Difference [3]/[2]	3.58%	-0.59%	4.20%	31.36%	10.26%	13.64%	17.04%	4.19%	34.98%	5.15%	0.63%	13.61%	11.05%

Office of Regulatory Staff
History of Cumulative Recovery Accounts
Duke Energy Carolinas, LLC
Docket No. 2019-3-E

EXHIBIT MSH-4

Period Ending	Base Fuel Costs (Over)/Under	Environmental Costs (Over)/Under	Capacity Costs (Over)/Under	DERP Avoided Costs (Over)/Under
May-10	\$ (53,785,597)	\$ (3,242,609)	N/A	N/A
May-11	\$ 528,767	\$ (3,595,468)	N/A	N/A
May-12	\$ (41,792,888)	\$ (7,198,018)	N/A	N/A
May-13	\$ (25,476,878)	\$ (6,084,377)	N/A	N/A
May-14	\$ 35,958,217	\$ (1,788,254)	N/A	N/A
May-15	\$ 30,787,463	\$ (1,634,322)	\$ 1,048,969	N/A
May-16	\$ (35,017,408)	\$ (4,759,509)	\$ 1,875,605	\$ (263,642)
May-17	\$ 7,670,353	\$ (2,985,690)	\$ 792,575	\$ (235,096)
May-18	\$ 64,403,063	\$ (1,461,868)	\$ (910,631)	\$ (24,301)
May-19	\$ 86,217,228	\$ (965,535)	\$ (5,379,540)	\$ (1,472)

Office of Regulatory Staff
Calculation of Base Fuel Component
Duke Energy Carolinas, LLC
Docket No. 2019-3-E

EXHIBIT MSH-5

Projected Fuel Expense: October 2019 through September 2020	
Cost of Fuel	\$383,895,647
Projected S.C. Retail Sales (MWh)	21,886,062
Average Cost (¢/kWh)	1.7541
Revenue Difference To be Collected from October 2019 through September 2020	
(Over)/Under-Recovery at September 30, 2019	\$ 79,341,242
Projected S.C. Retail Sales (MWh)	21,886,062
Average Cost (¢/kWh)	0.3625
Base Fuel Cost per kWh: Projected Period	
Average Fuel Cost (¢/kWh)	1.7541
Revenue Difference (¢/kWh)	0.3625
Base Fuel Component (¢/kWh)	2.1166

Office of Regulatory Staff
Proposed Fuel Factors
Duke Energy Carolinas, LLC
Docket No. 2019-3-E

EXHIBIT MSH-6

	DEC Proposed Fuel Factors (¢/kWh)					ORS Proposed Fuel Factors (¢/kWh)				
	Base Fuel Cost Component	Environmental Cost Component	Capacity Related Cost Component	DERP Avoided Cost Component	Total Fuel Factor	Base Fuel Cost Component	Environmental Cost Component	Capacity Related Cost Component	DERP Avoided Cost Component	Total Fuel Factor
Residential	2.1105	0.0603	0.1101	0.0026	2.2835	2.1166	0.0603	0.1101	0.0026	2.2896
General Service / Lighting	2.1105	0.0249	0.0279	0.0012	2.1645	2.1166	0.0249	0.0279	0.0012	2.1706
Industrial	2.1105	0.0158	0.0131	0.0007	2.1401	2.1166	0.0158	0.0131	0.0007	2.1462